

acm computing surveys

Volumes 20-24 • 1988-1992

The Survey and Tutorial Journal of the ACM

CONTENTS

Vols. 20-24

Author Index

- Corrigenda.** Vol. 22, No. 4 (Dec. 1990), 409; Vol. 23, No. 3 (Sept. 1991), 413.
- Five-Year Author Index (1987-1991).** Vol. 23, No. 4 (Dec. 1991), 545-548.
- Five-Year Subject Index (1986-1990).** Vol. 23, No. 4 (Dec. 1991), 548-550.
- Abbott, R. J.** Resourceful Systems for Fault Tolerance, Reliability, and Safety. Vol. 22, No. 1 (March 1990), 35-68.
- Abbott, R. J.** Surveyor's Forum: Response to Strigini's comments on "Resourceful Systems for Fault Tolerance, Reliability, and Safety." Vol. 23, No. 3 (Sept. 1991), 409-411.
- Abeyesundara, B. W., and Kamal, A. E.** High-Speed Local Area Networks and Their Performance: A Survey. Vol. 23, No. 2 (June 1991), 221-264.
- Abramson, B.** Control Strategies for Two-Player Games. Vol. 21, No. 2 (June-1989), 137-161.
- Adam, N. R., and Wortmann, J. C.** Security-Control Methods for Statistical Databases: A Comparative Study. Vol. 21, No. 4 (Dec. 1989), 515-556.
- Ahuja, N.** See Hwong, Y. K. Vol. 24, No. 3 (Sept. 1992), 219-291.
- Andrews, G. R.** Paradigms for Process Interaction in Distributed Programs. Vol. 23, No. 1 (March 1991), 49-90.
- Aurenhammer, I.** Voronoi Diagrams—A Survey of a Fundamental Geometric Data Structure. Vol. 23, No. 3 (Sept. 1991), 345-406.
- Bal, H. E., Steiner, J. G., and Tanenbaum, A. S.** Programming Languages for Distributed Computing Systems. Vol. 21, No. 3 (Sept. 1989), 261-322.
- Barghouti, N. S., and Kaiser, G. E.** Concurrency Control in Advanced Database Applications. Vol. 23, No. 3 (Sept. 1991), 269-318.
- Barkmeyer, E.** See Thomas, G. Vol. 22, No. 3 (Sept. 1990), 237-266.
- Bell, T., Witten, I. H., and Cleary, J. G.** Modeling for Text Compression. Vol. 21, No. 4 (Dec. 1989), 557-599.
- Brinch Hansen, P.** Householder Reduction of Linear Equations. Vol. 24, No. 2 (June 1992), 185-194.
- Brown, L. G.** A Survey of Image Registration Techniques. Vol. 24, No. 4 (Dec. 1992), 325-376.
- Bryant, R. E.** Symbolic Boolean Manipulation with Ordered Binary-Decision Diagrams. Vol. 24, No. 3 (Sept. 1992), 293-318.
- Carriero, N., and Gelernter, D.** How to Write Parallel Programs: A Guide to the Perplexed. Vol. 21, No. 3 (Sept. 1989), 323-357.
- Carter, F.** See Thomas, G. Vol. 22, No. 3 (Sept. 1990), 237-266.
- Chanson, S. T.** See Chin, R. S. Vol. 23, No. 1 (Mar. 1991), 91-124.
- Chin, R. S., and Chanson, S. T.** Distributed Object-Based Programming Systems. Vol. 23, No. 1 (March 1991), 91-124.
- Chu, P.** See Mannino, M. V. Vol. 20, No. 3 (Sept. 1988), 191-221.
- Chung, C.-W.** See Thomas, G. Vol. 22, No. 3 (Sept. 1990), 237-266.
- Cleary, J. G.** See Bell, T. Vol. 21, No. 4 (Dec. 1989), 557-591.
- Colburn, C. J., and Van Oorschot, P. C.** Applications of Combinatorial Designs in Computer Science. Vol. 21, No. 2 (June 1989), 223-250.
- Danforth, S. and Tomlinson, C.** Type Theories and Object-Oriented Programming. Vol. 20, No. 1 (Mar. 1988), 29-72.
- Du, H. C.** See Enbody, R. J. Vol. 20, No. 2 (June 1988), 85-113.
- Dunham, C. B.** Surveyors' Forum. Vol. 24, No. 3 (Sept. 1992), 319.
- Eich, M. H.** See Mishra, P. Vol. 24, No. 1 (March 1992), 63-113.
- Ellman, T.** Explanation Based Learning: A Survey of Programs and Perspectives. Vol. 21, No. 2 (June 1989), 163-221.
- Elmagarmid, A. K. and Pu, C.** Introduction to the Special Issue on Heterogeneous Databases. Vol. 22, No. 3 (Sept. 1990), 175-178.
- Estivill-Castro, V., and Wood, D.** A Survey of Adaptive Sorting Algorithms. Vol. 24, No. 4 (Dec. 1992), 441-476.
- Enbody, R. J., and Du, H. C.** Dynamic Hashing Schemes. Vol. 20, No. 2 (June 1988), 85-113.

- Fox, S.** See Thomas, G. Vol. 22, No. 3 (Sept. 1990), 237-266.
- Frieder, G.** See Stytz, M. R. Vol. 23, No. 4 (Dec. 1991), 421-500.
- Frieder, O.** See Stytz, M. R. Vol. 23, No. 4 (Dec. 1991), 421-500.
- Fua, P.** See Suetens, P. Vol. 24, No. 1 (March 1992), 5-61.
- Gaili, Z. and Italiano, G. F.** Data Structures and Algorithms for Disjoint Set Union Problems. Vol. 23, No. 3 (Sept. 1991), 319-344.
- Gelernter, D.** See Carriero, N. Vol. 21, No. 3 (Sept. 1989), 323-357.
- Goldberg, D.** What Every Computer Scientist Should Know About Floating-Point Arithmetic. Vol. 23, No. 1 (March 1991), 5-48.
- Hanson, A. J.** See Suetens, P. Vol. 24, No. 1 (March 1992), 5-61.
- Hartman, B.** See Thomas, G. Vol. 22, No. 3 (Sept. 1990), 237-266.
- Hartson, H. R., and Hix, D.** Human-Computer Interface Development: Concepts and Systems. Vol. 21, No. 1 (Mar. 1989), 5-92.
- Helmbold, D. P.** See McDowell, D. E. Vol. 21, No. 4 (Dec. 1989), 593-622.
- Hix, D.** See Hartson, H. R. Vol. 21, No. 1 (Mar. 1989), 5-92.
- Hudak, P.** Conception, Evolution, and Application of Functional Programming Languages. Vol. 21, No. 3 (Sept. 1989), 359-411.
- Hwong, Y. K., and Ahuja, N.** Gross Motion Planning—A Survey. Vol. 24, No. 3 (Sept. 1992), 219-291.
- Italiano, G. F.** See Gaili, Z. Vol. 23, No. 3 (Sept. 1991), 319-344.
- Johnson, A. M., Jr., and Malek, M.** Survey of Software Tools for Evaluating Reliability, Availability and Serviceability. Vol. 20, No. 4 (Dec. 1988), 227-269.
- Kaiser, G. E.** See Barghouti, N. S. Vol. 23, No. 3 (Sept. 1991), 269-318.
- Kamal, A. E.** See Abeyundara, B. W. Vol. 23, No. 2 (June 1991), 221-264.
- Katz, R. H.** Toward a Unified Framework for Version Modeling in Engineering Databases. Vol. 22, No. 4 (Dec. 1990), 375-408.
- King, J. L.** See Kraemer, K. L. Vol. 20, No. 2 (June 1988), 115-146.
- Knight, K.** Unification: A Multidisciplinary Survey. Vol. 21, No. 1 (Mar. 1989), 93-124.
- Kraemer, K. L., and King, J. L.** Computer-Based Systems for Cooperative Work and Group Decision Making. Vol. 20, No. 2 (June 1988), 115-146.
- Krueger, C.** Software Reuse. Vol. 24, No. 2 (June 1992), 131-183.
- Kukich, K.** Techniques for Automatically Correcting Words in Text. Vol. 24, No. 4 (Dec. 1992), 377-440.
- Larson, J. A.** See Sheth, A. P. Vol. 22, No. 3 (Sept. 1990), 184-236.
- Levy, E., and Silberschatz, A.** Distributed File Systems: Concepts and Examples. Vol. 22, No. 4 (Dec. 1990), 321-374.
- Litwin, W., Mark, L., and Roussopoulos, N.** Interoperability of Multiple Autonomous Databases. Vol. 22, No. 3 (Sept. 1990), 267-293.
- Malek, M.** See Johnson, A. M., Jr. Vol. 20, No. 4 (Dec. 1988), 227-269.
- Mandl, R.** Surveyors' Forum. Vol. 22, No. 2 (June 1990), 171.
- Mannino, M. V., Chu, P., and Sager, T.** Statistical Profile Estimation in Database Systems. Vol. 20, No. 3 (Sept. 1988), 191-221.
- March, S. T.** Editorial Policy. Vol. 20, No. 2 (June 1988), 77-84.
- March, S. T.** Editorial Policy. Vol. 21, No. 2 (June 1989), 129-136.
- March, S. T.** Editorial Policy. Vol. 22, No. 2 (June 1990), 73-81.
- March, S. T.** Editorial Policy. Vol. 23, No. 2 (June 1991), 133-141.
- March, S. T.** Editorial Policy. Vol. 24, No. 2 (June 1992), 117-125.
- Mark, L.** See Litwin, W. Vol. 22, No. 3 (Sept. 1990), 267-293.
- Maryanski, F.** See Peckham, J. Vol. 20, No. 3 (Sept. 1988), 153-189.
- Mazumder, P.** See Shahookan, K. Vol. 23, No. 2 (June 1991), 143-220.
- McDowell, C. E., and Helmbold, D. P.** Debugging Concurrent Programs. Vol. 21, No. 4 (Dec. 1989), 593-622.
- McGeoch, C.** Analyzing Algorithms by Simulation: Variance Reduction Techniques and Simulation Speedups. Vol. 24, No. 2 (June 1992), 195-212.
- McKenzie, L. E., and Snodgrass, R. T.** An Evaluation of Relational Algebras Incorporating the Time Dimension in Databases. Vol. 23, No. 4 (Dec. 1991), 501-543.
- Mishra, P., and Eich, M. H.** Join Processing in Relational Databases. Vol. 24, No. 1 (March 1992), 63-113.
- Muntz, R. R.** A Personal Note. Vol. 24, No. 3 (Sept. 1992), 213-214.
- Onvural, R. O.** Survey of Closed Queueing Networks with Blocking. Vol. 22, No. 2 (June. 1990), 83-121.

- Pawlikowski, K.** Steady-State Simulation of Queueing Processes: A Survey of Problems and Solutions. Vol. 22, No. 2 (June 1990), 124-170.
- Peckham, J., and Maryanski, F.** Semantic Data Models. Vol. 20, No. 3 (Sept. 1988), 153-189.
- Pu, C.** See Elmagarmid, A. K. Vol. 22, No. 3 (Sept. 1990), 175-178.
- Rosenblum, D. S.** See Sankar, S. Vol. 23, No. 1 (March 1991), 125-127.
- Roussopoulos, N.** See Litwin, W. Vol. 22, No. 3 (Sept. 1990), 267-293.
- Sager, T.** See Mannino, M. V. Vol. 20, No. 3 (Sept. 1988), 191-221.
- Samet, H.** Hierarchical Representations of Collections of Small Rectangles. Vol. 20, No. 4 (Dec. 1988), 271-309.
- Sankar, S., and Rosenblum, D. S.** Surveyor's Forum: Routine Checking and Debugging of Formally Specified Programs. Vol. 23, No. 1 (March 1991), 125-127.
- Schneider, F. B.** Implementing Fault-Tolerant Services Using the State Machine Approach: A Tutorial. Vol. 22, No. 4 (Dec. 1990), 299-319.
- Shahookar, K., and Mazumder, P.** VLSI Placement Techniques. Vol. 23, No. 2 (June 1991), 143-220.
- Shapiro, E.** Corrigendum. Vol. 21, No. 4 (Dec. 1989), 629.
- Shapiro, E.** The Family of Concurrent Logic Programming Languages. Vol. 21, No. 3 (Sept. 1989), 413-510.
- Sheth, A. P., and Larson, J. A.** Federated Database Systems for Managing Distributed, Heterogeneous, and Autonomous Databases. Vol. 22, No. 3 (Sept. 1990), 184-236.
- Silberschatz, A.** See Levy, E. Vol. 22, No. 4 (Dec. 1990), 321-374.
- Snodgrass, R. T.** See McKenzie, L. E. Vol. 23, No. 4 (Dec. 1991), 501-543.
- Steiner, J. G.** See Bal, H. E. Vol. 21, No. 3 (Sept. 1989), 261-322.
- Strigini, L.** Surveyor's Forum: Comments on "Resourceful Systems for Fault Tolerance, Reliability and Safety". Vol. 23, No. 3 (Sept. 1991), 407-409.
- Stytz, M. R., Frieder, G., and Frieder, O.** Three-Dimensional Medical Imaging: Algorithms and Computer Systems. Vol. 23, No. 4 (Dec. 1991), 421-500.
- Suetens, P., Fua, P., and Hanson, A. J.** Computational Strategies for Object Recognition. Vol. 24, No. 1 (March 1992), 5-61.
- Takagi, H.** Queueing Analysis of Polling Models. Vol. 20, No. 1 (Mar. 1988), 5-28.
- Tanenbaum, A. S.** See Bal, H. E. Vol. 21, No. 3 (Sept. 1989), 261-322.
- Templeton, M.** See Thomas, G. Vol. 22, No. 3 (Sept. 1990), 237-266.
- Thomas, G., Thompson, G. R., Chung, C.-W., Barkmeyer, E., Carter, F., Templeton, M., Fox, S., and Hartman, B.** Heterogeneous Distributed Database Systems for Production Use. Vol. 22, No. 3 (Sept. 1990), 237-266.
- Thompson, G. R.** See Thomas, G. Vol. 22, No. 3 (Sept. 1990), 237-266.
- Tomlinson, C.** See Danforth, S. Vol. 20, No. 1 (Mar. 1988), 29-72.
- Van de Goor, A. J., and Verruijt, C. A.** An Overview of Deterministic Functional RAM Chip Testing. Vol. 22, No. 1 (Mar. 1990), 5-33.
- Van Oorshot, P. C.** See Colbourn, C. J. Vol. 21, No. 2 (June 1989), 223-250.
- Verruijt, C. A.** See Van de Goor, A. J. Vol. 22, No. 1 (Mar. 1990), 5-33.
- Wegner, P.** Introduction to the Special Issue on Programming Language Paradigms. Vol. 21, No. 3 (Sept. 1989), 253-258.
- Wichmann, B. A.** Surveyors' Forum. Vol. 24, No. 3 (Sept. 1992), 319.
- Witten, I. H.** See Bell, T. Vol. 21, No. 4 (Dec. 1989), 557-591.
- Wood, D.** See Estivill-Castro, V. Vol. 24, No. 4 (Dec. 1992), 441-476.
- Wortmann, J. C.** See Adam, N. R. Vol. 21, No. 4 (Dec. 1989), 515-556.

Subject Index 1988-1992

Algorithms

Galil and Italiano

Aurenhammer

McGeoch

Bryant

Estivill-Castro and Wood

September 1991

September 1991

June 1992

September 1992

December 1992

Artificial Intelligence

Abramson

June 1989

Ellman

June 1989

Kukich

December 1992

Computer Architecture; IC Design

Van de Goor and Verruijt

March 1990

Shahookar and Mazumder

June 1991

Computer System Design

Goldberg

March 1991

Computing Methodologies

Knight

March 1989

Data Communications and Networks

Abeyesundara and Kamal

June 1991

Database Management

Peckham and Maryanski

September 1988

Mannino, Chu, and Sager

September 1988

Adam and Wortmann

December 1989

Sheth and Larson

September 1990

Thomas, Thompson, Chung, Barkmeyer, Carter,

Templeton, Fox, and Hartman

September 1990

Litwin, Mark, and Roussopoulos

September 1990

Katz

December 1990

Barghouti and Kaiser

September 1991

McKenzie and Snodgrass

December 1991

Mishra and Eich

March 1992

Data Management and Organization

Enbody and Du

March 1988

Samet

December 1988

Bell, Witten, and Cleary

December 1989

Distributed and Cooperative Computing

Andrews

March 1991

Fault-Tolerant Software

Abbott

March 1990

Graphics and Image Processing

Stytz, Frieder, and Frieder

December 1991

Suetens, Fua, and Hanson

March 1992

Hwang and Ahuja

September 1992

Brown

December 1992

Information Systems Applications

Kraemer and King

June 1988

Networks: Distributed Computing

Schneider

December 1990

Operating Systems

Levy and Silberschatz

December 1990

Chin and Chanson

March 1991

Performance Modeling

Takagi

March 1988

Johnson and Malek

December 1988

Onvural

June 1990

Programming Languages

Danforth

March 1988

Bal, Steiner, and Tanenbaum

September 1989

Carriero and Gelernter

September 1989

Hudak

September 1989

Shapiro

September 1989

Programming Methods, Validation, Testing

McDowell and Helmbold

December 1989

Krueger

June 1992

Brinch Hansen

June 1992

Simulation and Modeling

Pawlikowski

June 1990

Theory of Computation

Colbourn and van Oorshot

June 1989

User Psychology

Hartson and Hix

March 1989

